AMENDMENTS TO THE CLAIMS

The following is a complete, marked-up listing of revised claims with a status identifier in parenthesis, underlined text indicating insertions, and strike through and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1. (Currently Amended) A method for realizing signaling agent based on a media gateway control protocol, comprising:

providing an agent equipment between media gateways and a media gateway controller that locate in different networks, the agent equipment providing signaling agent and network address translation between different networks; and

requesting to register the media gateway controller from a media gateway; wherein:

for a MGCP/MEGACO signaling sent from the media gateway to the media gateway controller, if not related to media, directly replacing a transaction number by the agent equipment and then forwarding according to domain name in endpoint identifier; and if the MGCP/MEGACO signaling is related to media, processing a media attribute correspondingly by the agent equipment and then forwarding; and

if the MGCP/MEGACO signaling is related to media, creating or modifying a corresponding media forwarding port and a forwarding table on the agent equipment after receiving a signaling for establishing or modifying a connection sent to a media gateway from the media gateway controller, replacing relevant information on media in

the signaling with information on corresponding network address of the media forwarding port on the agent equipment, and then forwarding the signaling to the media gateway; and

for a MGCP/MEGACO signaling sent from the media gateway controller to media gateway, sending the request message to corresponding media gateway by the agent equipment according to domain name in endpoint identifier.

2. (Previously Presented) The method for realizing signaling agent based on a media gateway control protocol of claim 1, wherein each of all media gateways under control of same media gateway controller has different domain name, each endpoint identifier includes domain name information of a media gateway, and the media gateway controller distinguishes media gateways according to their domain names in the endpoint identifiers.

3. (Previously Presented) The method for realizing signaling agent based on a media gateway control protocol of claim 1, wherein the step of requesting for registering to the media gateway controller from a media gateway further comprises:

sending a request message for registering to the media gateway controller from the media gateway, and recording message identifier of the media gateway received by the agent equipment to generate a piece of information about the media gateway;

assigning by the agent equipment a new transaction number to the request message for registering to replace original transaction number in the request message for registering;

recording the media gateway sending the request, and then forwarding the request message for registering to the media gateway controller;

registering the media gateway successfully, and then sending a response message for registering to the media gateway from the media gateway controller; and

determining the media gateway by the agent equipment according to the new transaction number in the response message for registering, replacing the new transaction number with the original transaction number, and then forwarding the response message for registering to corresponding media gateway.

4. (Previously Presented) The method for realizing signaling agent based on a media gateway control protocol of claim 1, wherein the step of replacing a transaction number by the agent equipment further comprises:

for each of request messages sent from the media gateway to the media gateway controller, assigning a new transaction number for a request message by the agent equipment, and recording the media gateway sending the request message;

after receiving on the agent equipment a response message for the request message sent by the media gateway controller, finding a corresponding media gateway according to a new transaction number assigned, replacing the new transaction

number in the response message with original transaction number, and then forwarding the response message to the corresponding media gateway.

5. (Currently Amended) The method for realizing signaling agent based on a media gateway control protocol of claim 1, wherein the step of processing a MGCP/MEGACO signaling that is related to media by the agent equipment further comprises:

~~creating or modifying a corresponding media forwarding port and a forwarding table on the agent equipment after receiving a signaling for establishing or modifying a connection sent to a media gateway from the media gateway controller;~~

~~replacing relevant information on media in the signaling with information on corresponding network address of the media forwarding port on the agent equipment, and then forwarding the signaling to the media gateway;~~

if the signaling is a signaling for creating a connection, further recording on the agent equipment an endpoint identifier of the connection,

modifying the forwarding table of a corresponding media forwarding port on the agent equipment according to a response signaling when the media gateway sends the media gateway controller the response signaling related to media;

replacing media information in the response signaling with information on network address of corresponding media port on the agent equipment, and then sending to the media gateway controller; and

sending a signaling for releasing the connection to the media gateway from the media gateway controller after calling finishes, releasing the corresponding media

forwarding port on the agent equipment according to the endpoint identifier, and then forwarding the signaling to the media gateway.

6. (Previously Presented) The method for realizing signaling agent based on a media gateway control protocol of claim 2, wherein the step of requesting for registering to the media gateway controller from a media gateway further comprises:

sending a request message for registering to the media gateway controller from the media gateway, and recording message identifier of the media gateway received by the agent equipment to generate a piece of information about the media gateway;

assigning by the agent equipment a new transaction number to the request message for registering to replace original transaction number in the request message for registering,

recording the media gateway sending the request, and then forwarding the request message for registering to the media gateway controller;

registering the media gateway successfully, and then sending a response message for registering to the media gateway from the media gateway controller; and

determining the media gateway by the agent equipment according to the new transaction number in the response message for registering, replacing the new transaction number with the original transaction number, and then forwarding the response message for registering to corresponding media gateway.

7. (Previously Presented) The method for realizing signaling agent based on a media gateway control protocol of claim 2, wherein the step of replacing a transaction number by the agent equipment further comprises:

for each of request messages sent from the media gateway to the media gateway controller, assigning a new transaction number for a request message by the agent equipment, and recording the media gateway sending the request message;

after receiving on the agent equipment a response message for the request message sent by the media gateway controller, finding a corresponding media gateway according to a new transaction number assigned, replacing the new transaction number in the response message with original transaction number, and then forwarding the response message to the corresponding media gateway.

8. (Currently Amended) The method for realizing signaling agent based on a media gateway control protocol of claim 2, wherein the step of processing a MGCP/MEGACO signaling that is related to media by the agent equipment further comprises:

~~creating or modifying a corresponding media forwarding port and a forwarding table on the agent equipment after receiving a signaling for establishing or modifying a connection sent to a media gateway from the media gateway controller;~~

~~replacing relevant information on media in the signaling with information on corresponding network address of the media forwarding port on the agent equipment, and then forwarding the signaling to the media gateway;~~

if the signaling is a signal for creating a connection, further recording on the agent equipment an endpoint identifier of the connection,

modifying the forwarding table of a corresponding media forwarding port on the agent equipment according to a response signaling when the media gateway sends the media gateway controller the response signaling related to media;

replacing media information in the response signaling with information on network address of corresponding media port on the agent equipment, and then sending to the media gateway controller; and

sending a signaling for releasing the connection to the media gateway from the media gateway controller after calling finishes, releasing the corresponding media forwarding port on the agent equipment according to the endpoint identifier, and then forwarding the signaling to the media gateway.